# SAMPLE 4-YEAR PLAN: BIOLOGY B.A. - B.S.

## **Northern Kentucky University**

This is **one way** a student can complete this program in four years if the student enters NKU with a mathematics ACT score of 25 or higher.

MAJOR: Biology TRACK: B.S. General Biology

| FIRST YEAR  | Fall Semester  |                                   | Spring Semester  |      |
|---|--|-----------------------------------|--|------|
| In addition to these courses for your   | BIO 150 Introduction to  | 4                                 |  | 2    |
| major, you should be taking an  | Biology and BIO 150L   |                                   | Biology II and BIO 151L  |      |
| appropriate mathematics course and  | Introduction to Biology Lab  |                                   | Introduction to Biology II   |      |
| consider taking a foreign language if   |  |                                   | Laboratory   |      |
| you are continuing a language from  | CHE 120 General Chemistry I  | 4                                 | CHE 121 General Chemistry II   | 4    |
| high school.  | and CHE 120L General   |                                   | and CHE 121L General   |      |
|   | Chemistry Lab I Laboratory   |                                   | Chemistry II Laboratory  |      |
|   | ENG 101 College Writing  | 3                                 | MAT 112 Applied Calculus or  | 3-   |
|   |  |                                   | MAT 129 Calculus I   |      |
|   | BIO 155 Orientation to   | 1                                 | CMST 101 Public Speaking   | :    |
|   | Biology  |                                   |  |      |
|   | Gen Ed   | 3                                 |  |      |
|   | TOTAL  | 15                                | TOTAL  | 14-1 |
| SECOND YEAR   | Fall Semester  |                                   | Spring Semester  |      |
|   | BIO 349 Genetics and BIO   | 4                                 | BIO 304 General Biology and  | 2    |
|   | 349L Genetics Laboratory   |                                   | BIO 304L Ecology Laboratory  |      |
|   | BIO 291W Advanced Writing  | 3                                 | STA 205 Introduction to  | :    |
|   | in Biology   |                                   | Statistical Methods  |      |
|   | CHE 310 Organic Chemistry  | 4                                 | CHE 311 Organic Chemistry II   |      |
|   | and CHE 310L Organic   |                                   | and CHE 311L*Organic   |      |
|   | Chemistry Laboratory   |                                   | Chemistry II Laboratory  |      |
|   | Gen Ed (Foreign Language)  | 3                                 | Foreign Language   | ;    |
|   | Gen Ed   | 3                                 | Gen Ed   |      |
|   | TOTAL  | 17                                | TOTAL  | 1    |
| THIRD YEAR  | Fall Semester  |                                   | Spring Semester  |      |
| The electives chosen should be from   | GMC elective**   | 3                                 | EEO elective**   |      |
| the appropriate course groups to fulfill  | Field elective   | 4                                 | BIO 358 Evolution of   |      |
| the requirements for this track.  |  |                                   | Organisms  |      |
|   |  |                                   |  |      |
|   | PHY 211 General Physics  | 5                                 | PHY 213 General Physics  |      |
|   | PHY 211 General Physics<br>with Laboratory   | 5                                 | PHY 213 General Physics<br>with Laboratory II  |      |
|   |  |                                   |  | :    |
|   | with Laboratory<br>Elective 300 level or above   | 3                                 | with Laboratory II<br>Elective 300 level or above  |      |
|   | with Laboratory<br>Elective 300 level or above<br>TOTAL  |                                   | with Laboratory II<br>Elective 300 level or above<br>TOTAL   |      |
| FOURTH YEAR   | with Laboratory<br>Elective 300 level or above<br>TOTAL<br>Fall Semester   | 3<br>15                           | with Laboratory II<br>Elective 300 level or above<br>TOTAL<br>Spring Semester  | 1    |
| The electives chosen should be from   | with Laboratory<br>Elective 300 level or above<br>TOTAL<br>Fall Semester<br>BIO elective   | 3<br>15<br>4                      | with Laboratory II<br>Elective 300 level or above<br>TOTAL<br>Spring Semester<br>BIO elective  | 1    |
| The electives chosen should be from the appropriate course groups to fulfill  | with Laboratory<br>Elective 300 level or above<br>TOTAL<br>Fall Semester   | 3<br>15<br>4                      | with Laboratory II<br>Elective 300 level or above<br>TOTAL<br>Spring Semester<br>BIO elective<br>BIO 491 Comprehensive                                       | 1    |
| The electives chosen should be from<br>the appropriate course groups to fulfill<br>the requirements for this track. In  | with Laboratory<br>Elective 300 level or above<br>TOTAL<br>Fall Semester<br>BIO elective<br>Gen Ed                                 | 3<br>15<br>4<br>3                 | with Laboratory II<br>Elective 300 level or above<br>TOTAL<br>Spring Semester<br>BIO elective<br>BIO 491 Comprehensive<br>Examination                        | 1    |
| The electives chosen should be from<br>the appropriate course groups to fulfill<br>the requirements for this track. In<br>addition, you should make sure you  | with Laboratory<br>Elective 300 level or above<br>TOTAL<br>Fall Semester<br>BIO elective   | 3<br>15<br>4                      | with Laboratory II<br>Elective 300 level or above<br>TOTAL<br>Spring Semester<br>BIO elective<br>BIO 491 Comprehensive<br>Examination<br>Gen Ed              | 1    |
| The electives chosen should be from<br>the appropriate course groups to fulfill<br>the requirements for this track. In<br>addition, you should make sure you<br>have taken enough classes at the 300  | with Laboratory<br>Elective 300 level or above<br>TOTAL<br>Fall Semester<br>BIO elective<br>Gen Ed                                 | 3<br>15<br>4<br>3                 | with Laboratory II<br>Elective 300 level or above<br>TOTAL<br>Spring Semester<br>BIO elective<br>BIO 491 Comprehensive<br>Examination                        | 1    |
| The electives chosen should be from<br>the appropriate course groups to fulfill<br>the requirements for this track. In<br>addition, you should make sure you<br>have taken enough classes at the 300<br>level or above to satisfy the university  | with Laboratory<br>Elective 300 level or above<br>TOTAL<br>Fall Semester<br>BIO elective<br>Gen Ed<br>Electives 300 level or above | 3<br>15<br>4<br>3<br>7            | with Laboratory II<br>Elective 300 level or above<br>TOTAL<br>BIO elective<br>BIO 491 Comprehensive<br>Examination<br>Gen Ed<br>Electives 300 level or above | 1    |
| FOURTH YEAR<br>The electives chosen should be from<br>the appropriate course groups to fulfill<br>the requirements for this track. In<br>addition, you should make sure you<br>have taken enough classes at the 300<br>level or above to satisfy the university<br>requirement of 45 hours. | with Laboratory<br>Elective 300 level or above<br>TOTAL<br>Fall Semester<br>BIO elective<br>Gen Ed                                 | 3<br>15<br>4<br>3<br>7<br>7<br>14 | with Laboratory II<br>Elective 300 level or above<br>TOTAL<br>Spring Semester<br>BIO elective<br>BIO 491 Comprehensive<br>Examination<br>Gen Ed              |      |

Notes:

\* Students may elect to substitute another course for CHE 311 and CHE 311L; please see catalog for list of approved courses.

• \*\* Refer to the Biological Sciences Course Groups for a list of courses.

## MAJOR: Biology

TRACK: Cell/Molecular/Genetics

| FIRST YEAR   | Fall Semester                |    | Spring Semester                      |                 |
|--|------------------------------|----|--------------------------------------|-----------------|
|  | BIO 150 Introduction to      | 4  | BIO 151 Introduction to              | 4               |
|  | Biology and BIO 150L         |    | Biology II and BIO 151L              |                 |
|  | Introduction to Biology I    |    | Introduction to Biology II           |                 |
|  | Laboratory                   |    | Laboratory                           |                 |
|  | CHE 120 General Chemistry I  | 4  | CHE 121 General Chemistry II         | 4               |
|  | and CHE 120L General         | -  | and CHE 121L General                 | -               |
|  | Chemistry I with Laboratory  |    | Chemistry II Laboratory              |                 |
|  | ENG 101 College Writing      | 3  | MAT 112 Applied Calculus or          | 3-4             |
|  | 5 5                          |    | MAT 129 Calculus I                   |                 |
|  | STA 205 Introduction to      | 3  | CMST 101 Public Speaking             | 3               |
|  | Statistical Methods          |    |                                      |                 |
|  | BIO 155 Orientation to       | 1  |                                      |                 |
|  | Biology                      |    |                                      |                 |
|  | TOTAL                        | 15 | TOTAL                                | 14-15           |
| SECOND YEAR  | Fall Semester                |    | Spring Semester                      |                 |
| OLOOND TEAN  | BIO 349 Genetics and BIO     | 4  | BIO 304 General Ecology              | 3               |
|  | 349L Genetics Laboratory     | r  |                                      | 0               |
|  | BIO 291W Advanced Writing    | 3  | CHE 311 Organic Chemistry II         | 4               |
|  | in Biology                   | 2  | and CHE 311L Organic                 |                 |
|  |                              |    | Chemistry II Laboratory              |                 |
|  | CHE 310 Organic Chemistry I  | 4  | Gen Ed                               | 6               |
|  | and CHE 310L Organic         |    |                                      |                 |
|  | Chemistry I with Laboratory  |    |                                      |                 |
|  | BIO 342 Biometry             | 3  | Foreign Language                     | 3               |
|  | Gen Ed (foreign language)    | 3  |                                      |                 |
|  | TOTAL                        | 17 | TOTAL                                | 16              |
| THIRD YEAR   | Fall Semester                |    | Spring Semester                      |                 |
| The electives chosen should be from  | BIO 302 General              | 4  | GMC* elective                        | 4               |
| the appropriate course groups to fulfill   | Microbiology and BIO 302L    |    |                                      |                 |
| the requirements for this track.   | General Microbiology         |    |                                      |                 |
|  | Laboratory                   |    |                                      |                 |
|  | PHY 211 General Physics      | 5  | CHE 483 Biochemistry II              | 3               |
|  | with Laboratory              |    | Ş                                    |                 |
|  | CHE 482 Biochemistry I       | 3  | PHY 213 General Physics              | 5               |
|  |                              |    | with Laboratory II                   |                 |
|  | Gen Ed                       | 3  | Gen Ed                               | 3               |
|  |                              |    |                                      |                 |
|  | TOTAL                        | 15 | TOTAL                                | 15              |
|  |                              |    |                                      |                 |
| FOURTH YEAR  | Fall Semester                |    | Spring Semester                      |                 |
| The electives chosen should be from  | GMC* elective                | 4  | BIO elective                         | 4               |
| the appropriate course groups to fulfill   | BIO 400 Advanced Molecular   | 4  | BIO 491 Comprehensive                | 0               |
| the requirements for this track. In  | Biology and BIO 400L         |    | Examination                          | -               |
| addition, you should make sure you   | Advanced Molecular Biology   |    |                                      |                 |
|  |                              |    |                                      |                 |
|  | Electives 300 level or above | 4  | BIO 360 Advanced Biology of the Cell | 3               |
| have taken enough classes at the 300 level or above to satisfy the university requirement of 45 hours. |                              |    |                                      |                 |
|  | Gen Ed                       | 3  | Electives 300 level or above         | 6               |
| level or above to satisfy the university   | Gen Ed                       |    | Electives 300 level or above         |                 |
| level or above to satisfy the university   |                              | 15 |                                      | 6<br>13<br>120- |

## • \* Refer to the Biological Sciences Course Groups for a list of courses.

#### MAJOR: Biology

TRACK: Ecology/Evolution/Organismal

| FIRST YEAR  | Fall Semester  |    | Spring Semester  |       |
|---|--|----|--|-------|
|   | BIO 150 Introduction to<br>Biology and BIO 150L<br>Introduction to Biology I<br>Laboratory | 4  | BIO 151 Introduction to<br>Biology II and BIO 151L<br>Introduction to Biology II<br>Laboratory | 4     |
|   | CHE 120 General Chemistry I<br>and CHE 120L General<br>Chemistry I Laboratory              | 4  | CHE 121 General Chemistry II<br>and CHE 121L General<br>Chemistry II Laboratory                | 4     |
|   | ENG 101 College Writing  | 3  | MAT 112 Applied Calculus or<br>MAT 129 Calculus I  | 3-4   |
|   | BIO 155 Orientation to<br>Biology  | 1  | CMST 101 Public Speaking   | 3     |
|   | Gen Ed   | 3  |  |       |
|   | TOTAL  | 15 | TOTAL  | 14-15 |
| SECOND YEAR   | Fall Semester  |    | Spring Semester  |       |
|   | BIO 304 General Ecology and<br>BIO 304L Ecology Laboratory                                 | 4  | BIO 349 Genetics and BIO<br>349L Genetics Laboratory   | 4     |
|   | BIO 291W Advanced Writing<br>in Biology  | 3  | BIO 342 Biometry   | 3     |
|   | CHE 310 Organic Chemistry I<br>and CHE 310L Organic<br>Chemistry I Laboratory              | 4  | CHE 311 Organic Chemistry II<br>and CHE 311L* Organic<br>Chemistry II Laboratory               | 4     |
|   | STA 205 Introduction to Statistical Methods  | 3  | Gen Ed   | 3     |
|   | Gen Ed   | 3  |  |       |
|   | TOTAL  | 17 | TOTAL  | 14    |
| THIRD YEAR  | Fall Semester  |    | Spring Semester  |       |
| The electives chosen should be from   | Ecology elective**   | 4  | Organismal elective**  | 3     |
| the appropriate course groups to fulfill the requirements for this track. You                                       | Field elective   | 4  | BIO 358 Evolution of<br>Organisms  | 3     |
| should also continue to take courses to fulfill the general education   | PHY 211 General Physics<br>with Laboratory I   | 5  | PHY 213 General Physics<br>with Laboratory II  | 5     |
| requirements and your mathematics requirement.  | Gen Ed (foreign language)  | 3  | Foreign language   | 3     |
|   | TOTAL  | 16 | TOTAL  | 14    |
| FOURTH YEAR   | Fall Semester  |    | Spring Semester  |       |
| The electives chosen should be from<br>the appropriate course groups to fulfill<br>the requirements for this track. | BIO elective   | 4  | BIO elective   | 4     |
|   | BIO elective   |    | BIO 491 Comprehensive<br>Examination   | 0     |
| requirement of 45 hours. In addition,   | Gen Ed   | 3  | Electives 300 level or above   | 11    |
| you should make sure you have taken enough classes at the 300 level or  | Elective 300 level or above  | 4  |  |       |
| above to satisfy the university requirement of 45 hours.  | TOTAL  | 15 | TOTAL  | 15    |
|   |  |    |  |       |

\* Students may elect to substitute another course for CHE 311 and CHE 311L; please see catalog for list of ap-• proved courses.
\*\* Refer to the Biological Sciences Course Groups for lists of courses.

MAJOR: Biology TRACK/OPTION: B.A. General Biology

| FIRST YEAR   | Fall Semester  |    | Spring Semester  |            |
|--|--|----|--|------------|
|  | BIO 150 Introduction to<br>Biology and BIO 150L<br>Introduction to Biology<br>Laboratory | 4  | BIO 151 Introduction to<br>Biology II and BIO 151L<br>Introduction to Biology II<br>Laboratory | 2          |
|  | CHE 120 General Chemistry I<br>and CHE 120L General<br>Chemistry I Laboratory            | 4  | CHE 121 General Chemistry II<br>and CHE 121L General<br>Chemistry II Laboratory                | 2          |
|  | ENG 101 College Writing  | 3  | MAT 112 Applied Calculus or<br>MAT 129 Calculus I  | 3-4        |
|  | BIO 155 Orientation to<br>Biology  | 1  | CMST 101 Public Speaking   | 3          |
|  | Gen Ed   | 3  |  |            |
|  | TOTAL  | 15 | TOTAL  | 14-1       |
| SECOND YEAR  | Fall Semester  |    | Spring Semester  |            |
|  | BIO 349 Genetics and<br>BIOL 349 Genetics<br>Laboratory                                  | 4  |  | 4          |
|  | BIO 291W Advanced Writing<br>in Biology  | 3  | STA 205 Introduction to<br>Statistical Methods   | 3          |
|  | CHE 310 Organic Chemistry I<br>and CHE 310L Organic<br>Chemistry I Laboratory            | 4  | Elective 300 level or above  | 2          |
|  | Gen Ed (Foreign Language)  | 3  | Foreign Language   | 3          |
|  | TOTAL  | 14 | TOTAL  | 14         |
| THIRD YEAR   | Fall Semester Spring Semester  |    |  |            |
| The electives chosen should be from  | GMC* elective  | 4  | BIO 410 Conservation Biology   | 2          |
| the appropriate course groups to fulfill the requirements for this track.  | EEO* elective  |    | BIO 358 Evolution of<br>Organisms  | 3          |
|  | PHY 211 General Physics<br>with Laboratory I   | 5  | PHY 213 General Physics<br>with Laboratory II  | Ę          |
|  | Gen Ed   | 3  | Gen Ed   |            |
|  | TOTAL  | 16 | TOTAL  | 15         |
| FOURTH YEAR  | Fall Semester  |    | Spring Semester  |            |
| The electives chosen should be from<br>the appropriate course groups to fulfill<br>the requirements for this track. In | Field elective   | 4  | BIO Elective   | 4          |
|  | Gen Ed   |    | BIO 491 Comprehensive<br>Examination   | (          |
| addition, you should make sure you<br>have taken enough classes at the 300<br>level or above to satisfy the university | Electives 300 level or above   | 9  | Electives 300 level or above   | 12         |
| requirement of 45 hours.   | TOTAL  | 16 | TOTAL  | 10         |
| 1  | IUIAL  | -  | GRAND TOTAL OF CREDITS   | 16<br>120- |

• \* Refer to the Biological Sciences Course Groups for lists of courses.

MAJOR: Biology TRACK: B.A. Teacher Education

| FIRST YEAR                            | Fall Semester               |   | Spring Semester              |   |
|---------------------------------------|-----------------------------|---|------------------------------|---|
| In addition to these courses for your | BIO 150 Introduction to     | 4 | BIO 151 Introduction to      | 4 |
| major you should be taking an         | Biology and BIO 150L        |   | Biology II and BIO 151L      |   |
| appropriate mathematics course and    | Introduction to Biology I   |   | Introduction to Biology II   |   |
| consider taking a foreign language if | Laboratory                  |   | Laboratory                   |   |
| you are continuing a language from    | CHE 120 General Chemistry I | 4 | CHE 121 General Chemistry II | 4 |
| high school.                          | and CHE 120L General        |   | and CHE 121L General         |   |
|                                       | Chemistry I Laboratory      |   | Chemistry II Laboratory      |   |

|   | ENG 101 College Writing  | 3  | PSY 100 Introduction to   | 3  |
|---|--|----|---|----|
|   | BIO 155 Orientation to<br>Biology  | 1  | Psychology (Gen Ed)<br>CMST 101 Public Speaking                         | 3  |
|   | Gen Ed   | 3  | EDU 104 Orientation:<br>Education<br>Profession/Program                 |    |
|   | TOTAL  | 15 | TOTAL   | 15 |
| SECOND YEAR   | Fall Semester  |    | Spring Semester   |    |
| In addition to these courses for your major you should continue to take   | BIO 349 Genetics and BIO<br>349L Genetics Laboratory                             | 4  | BIO 304 General Ecology and<br>BIO 304L Ecology Laboratory              | 4  |
| courses to fulfill the general education requirements and your mathematics  | BIO 291W Advanced Writing<br>in Biology  | 3  | BIO 358 Evolution of<br>Organisms                                       | 3  |
| requirement.  | STA 205 Introduction to<br>Statistical Methods                                   | 3  | EDU 300 Human Growth and<br>Development                                 | ;  |
|   | Gen Ed   | 3  | EDU 305 Introduction to<br>Education                                    | 4  |
|   | Foreign Language (Gen Ed)  | 3  | EDS 360 Students with<br>Exceptionalities in School                     | 2  |
|   |  |    | Foreign Language  | 3  |
|   | TOTAL  | 16 | TOTAL   | 17 |
| THIRD YEAR  | Fall Semester  |    | Spring Semester   |    |
| The electives chosen should be from   | BIO elective   | 4  | Gen Ed  |    |
| the appropriate course groups to fulfill the requirements for this track.   | PHY 211 General Physics<br>with Laboratory I                                     |    | PHY 213 General Physics with Laboratory II                              | :  |
|   | Gen Ed   | 3  | EDU 319 Classroom Climate<br>Secondary Management                       |    |
|   | EDU 311 Admission<br>Practicum for Secondary<br>Grades                           | 2  | EDS 324 Instructional<br>Planning for Inclusive<br>Secondary Classrooms | :  |
|   | EDU 313 Instructional<br>Technology  | 2  | EDU 324 Fundamentals of Secondary Education                             |    |
|   |  |    | EDU 393 Secondary<br>Practicum I  |    |
|   | TOTAL  | 16 | TOTAL   | 10 |
| FOURTH YEAR   | Fall Semester  |    | Spring Semester   |    |
| The electives chosen should be from   | BIO elective   | 4  | EDU 496 Clinical Experience<br>Secondary                                | 1: |
|   |  |    |   |    |
| the appropriate course groups to fulfill<br>the requirements for this track. In<br>addition, you should make sure you   | BIO elective   | 4  | BIO 491 Comprehensive<br>Examination                                    |    |
| the appropriate course groups to fulfill<br>the requirements for this track. In<br>addition, you should make sure you<br>have taken enough classes at the 300<br>level or above to satisfy the university                             | EDU 325 Educational<br>Assessment Secondary                                      | 4  | BIO 491 Comprehensive   |    |
| the appropriate course groups to fulfill<br>the requirements for this track. In<br>addition, you should make sure you<br>have taken enough classes at the 300<br>level or above to satisfy the university                             | EDU 325 Educational<br>Assessment Secondary<br>EDU 396 Secondary<br>Practicum II |    | BIO 491 Comprehensive   |    |
| the appropriate course groups to fulfill<br>the requirements for this track. In<br>addition, you should make sure you<br>have taken enough classes at the 300<br>level or above to satisfy the university<br>requirement of 45 hours. | EDU 325 Educational<br>Assessment Secondary<br>EDU 396 Secondary                 | 2  | BIO 491 Comprehensive   | (  |

Notes:

- Please consult the admissions requirements to the teacher education program when developing your plan.
- MAT 119 or a minimal mathematics ACT score of 25 or equivalent placement is required for PHY 211.
- Please note, general education courses and mathematics courses have been largely omitted from this list to allow the student the flexibility of choosing which courses and when to take them. Please be sure to include these courses in your personal four year plan.

MAJOR: Biology

TRACK: Forensic Science

| FIRST YEAR | Fall Semester | Spring Semester |
|------------|---------------|-----------------|
|            |               |                 |

|  | TOTAL   | 15 | TOTAL<br>GRAND TOTAL OF CREDITS                      | <u>12-13</u><br>120- |
|--|---|----|--|----------------------|
|  |   |    |  |                      |
|  |   | 3  |  |                      |
|  | Laboratory<br>Gen Ed                                  | 3  | Electives 300 level or above                         | ç                    |
|  | BIO 320L Entomology                                   | ·  | Systems  |                      |
|  | BIO 320 Entomology and                                | 4  | JUS 203 The Criminal Court                           |                      |
| requirement of 45 hours.   | CHE 482L Biochemistry I<br>Laboratory                 |    | Examination  |                      |
| level or above to satisfy the university                                     | CHE 482 Biochemistry I and                            | 4  | BIO 491 Comprehensive                                | (                    |
| have taken enough classes at the 300   |   |    | Analysis Laboratory                                  |                      |
| the requirements for this track. In addition, you should make sure you       |   |    | Instrumental Analysis and<br>CHE 350L Instrumental   |                      |
| the appropriate course groups to fulfill                                     |   |    | Microscopy or CHE 350                                |                      |
| The electives chosen should be from  | Elective 300 level or above                           | 4  | BIO 455 Scanning Electron                            | 3-4                  |
| FOURTH YEAR  | Fall Semester   |    | Spring Semester                                      |                      |
|  | TOTAL   | 16 | TOTAL  | 15                   |
|  |   | 3  | Gen Eu   | 3                    |
|  | Laboratory<br>Gen Ed                                  | 3  | Gen Ed   |                      |
|  | Advanced Chemistry                                    |    | -  |                      |
|  | Chemistry and CHE 340L                                | +  | with Laboratory II                                   |                      |
|  | with Laboratory I<br>CHE 340 Analytical               | Δ  | Criminal Justice<br>PHY 213 General Physics          | 5                    |
|  | PHY 211 General Physics                               | 5  | JUS 101 Introduction to                              | ć                    |
|  | Lab   |    |  |                      |
| the requirements for this track.   | Biology and BIO 400L<br>Advanced Molecular Biology    |    | Microbiology Laboratory                              |                      |
| The electives chosen should be from the appropriate course groups to fulfill | BIO 400 Advanced Molecular                            | 4  | BIO 302 General Microbiology<br>and BIO 302L General | 4                    |
| THIRD YEAR   | Fall Semester   |    | Spring Semester                                      |                      |
|  | TOTAL   | 17 | TOTAL  | 10                   |
|  | Gen Ed (Foreign Language)                             | 3  | Gen Ed   |                      |
|  | Statistical Methods                                   |    |  |                      |
|  | STA 205 Introduction to                               | 3  |  |                      |
|  | and CHE 310L Organic<br>Chemistry I with Laboratory   |    | and CHE 311L Organic<br>Chemistry II Laboratory      |                      |
|  | CHE 310 Organic Chemistry I                           | 4  | CHE 311 Organic Chemistry II                         |                      |
|  | in Biology  | 5  |  |                      |
|  | 349L Genetics Laboratory<br>BIO 291W Advanced Writing | 2  | BIO 342 Biometry                                     | 3                    |
|  | BIO 349 Genetics and BIO                              | 4  | BIO 304 General Ecology                              | 3                    |
| SECOND YEAR  | Fall Semester   |    | Spring Semester                                      |                      |
|  | TOTAL   | 15 | TOTAL  | 14-15                |
|  | Gen Ed  | 3  |  |                      |
|  | Biology   | 1  | CMST 101 Public Speaking                             | :                    |
|  | BIO 155 Orientation to                                | 4  | MAT 129 Calculus I                                   |                      |
|  | ENG 101 College Writing                               | 3  | MAT 112 Applied Calculus or                          | 3-4                  |
|  | Chemistry I Laboratory                                |    | Chemistry II Laboratory                              |                      |
|  | CHE 120 General Chemistry I<br>and CHE 120L General   | 4  | CHE 121 General Chemistry II<br>and CHE 121L General | 4                    |
|  | Laboratory  |    | Laboratory   |                      |
|  | Introduction to Biology                               |    | Introduction to Biology II                           |                      |
|  | BIO 150 Introduction to<br>Biology and BIO 150L       | 4  | BIO 151 Introduction to<br>Biology II and BIO 151L   |                      |

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